OCTOBER, 1906

Issued Every Month

for Free Distribution to all Users of Machine Tools

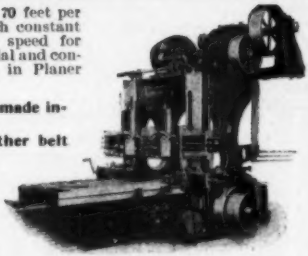
HITCHCOCK'S MACHINE TOOL LIST

A Reference Book for Buyers of Iron Working Machinery

A. H. HITCHCOCK

Cincinnati Variable Speed Planers

Give you from 15 to 70 feet per minute, with a high constant return. A proper speed for every kind of material and condition. The ideal in Planer construction.



Changes can be made instantly.

Adaptable to either belt or motor drive.

An increase in output of from thirty to fifty per cent.

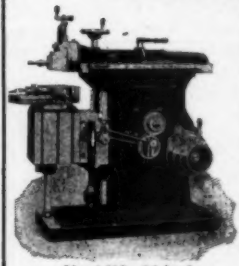
Catalogue?

Cincinnati Planer Co.

Cincinnati, O., U. S. A.

BUILT FOR SERVICE

THE CINCINNATI HEAVY DUTY B. G. CRANK SHAPER



Shapers, like other tools, are valuable for what they will do, for the work you can get out of them. We like to have buyers measure our shapers in this way, because we know service is their long suit. They do their work well, and they keep at it all the time. No delays in adjustments, no lost time while the tool is out of order; it is there, doing business, six days a week, and as many hours as your shop runs. The service quality is built into them with painstaking effort. We know it is there and are not afraid to guarantee it.

No. 1610—16 inch. **Want our Shaper Book?**

THE CINCINNATI SHAPER CO.

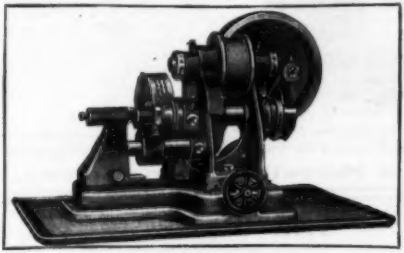
Colerain Ave. & Elam St., CINCINNATI, O.

THE

"Acme"

Semi-Automatic

Screw Slotting Machine



For slotting all styles of screws up to and including ***3-8x2 in., brass or steel.***

Built with column for floor
Built with pan for bench

SHIPMENT FROM STOCK

The National-Acme Mfg. Co.

Cleveland, Ohio, U. S. A.

Branch Offices: New York and Chicago

FOREIGN REPRESENTATIVES:

Alfred H. Schutte ***Schuchardt & Schutte***

SPEED--SPEED--SPEED

That's what you get in **Merrell Pipe Threading and Cutting Machines.** **Speed**—plenty of it, and **safe** speed; always under control; always in hand. The **Merrell Pipe Threading and Cutting Machines** will thread **more** iron or steel, rough or smooth pipe, no matter what the size, than **any** other machine.

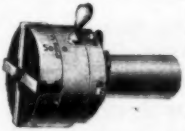
This machine can be used either as a hand and power, stationary or portable, by simply removing the head. The **Chasers** are set by graduation to any size desired, are released from cutting while the machine is in motion, opened to permit the pipe being cut off and closed instantly and positively; any size, style or pitch of thread may be cut, either right or left.

Write today for further interesting facts, showing just why the Merrell is the best pipe threading machine made today

The Merrell Mfg. Co., Toledo, O.

THE GEOMETRIC

Self-Opening Die Heads



lead because they are the most efficient, most economical and quickest thread cutting tools on the market; are equipped with every convenience for rapid production. Will save manufacturers having duplicate thread cutting to do at least fifty per cent in time and money over the old methods, besides giving a much better class of work.

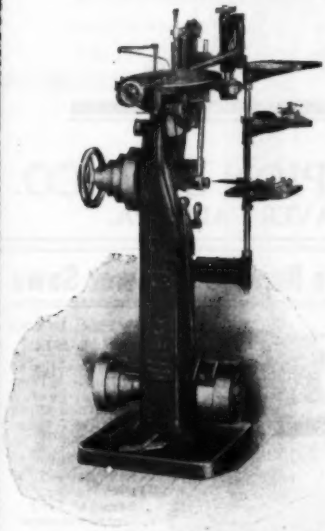
Description and prices in special booklet

THE GEOMETRIC TOOL CO., New Haven, Conn.

WHEN FIGURING TO REDUCE
THE COST, DON'T FORGET THE

Improved Cochrane-Bly

Filing Machine



It accurately machines parts which cannot be otherwise machined, doing away with expensive hand labor.

Uses files & hack saws. Indispensable for diemaking, metal pattern, tool making etc.

Let us know what your work is and ask us if our machine will do it.

We make two sizes of filing machines, also cold saw cutting-off machines and saw-sharpening machines.

ASK FOR OUR CATALOG

Cochrane-Bly Company

8-14 St. James St.,

Rochester, New York

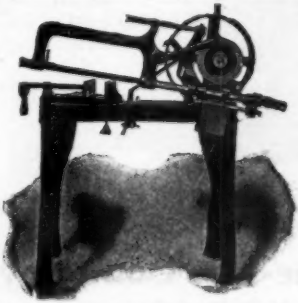
MILLING SAWS

Your milling saws should be of the best material and made by accurate machinery and skilled workmen. . . . Our saws have stood the test for forty years.

CHAMPION SAW CO.

BEAVER FALLS, PA.

Robertson's Rapid Cut Power Saws



OVER 9000 IN USE

Six sizes, 4x4 to 12x15 in. Save their cost in two weeks. No shop can afford to be without them.

If you want reliable power, get the

Robertson's Straight Line Gas or Gasolene Engine.

More reliable than steam.

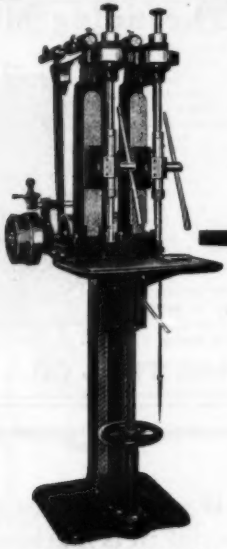
Get our prices and circulars

THE ROBERTSON MFG. CO.

Largest Makers of Metal Saws in the World

BUFFALO, N. Y.

Get Our Catalogue



(PATENTED.)

IT will give a list of prominent manufacturers using from one to two hundred spindles each, any one of which can be referred to for confirmation of the extraordinary statements made about our BALL-BEARING DRILL PRESSES.

Order a machine. The first order will certainly be followed by others up to your requirements.

The Henry & Wright Mfg. Co.

111-135 Sheldon St., Hartford, Conn.

"SQUARE DEAL"
Pipe Threading Machines

We make a line of these tools, cutting from ¼ to 12 inches, and make them as good as we know how. And we think we know something about the demands of the trade, for we endeavor to add to our long, practical experience a constant study of modern conditions. The result is an always-modern tool that will give you a square deal in its fullest sense. You can ask no more; you get no less from us or our machines.

If we may refer you to some near-by user, you will learn just what we mean

No. 1½ Cutting ½ to 3 Inches.

WILLIAMS TOOL CO. . . Erie, Pa.

If you require anything special in a machine tool to reduce your labor cost you cannot do better than to let us know about it.

"Two heads are better than one"

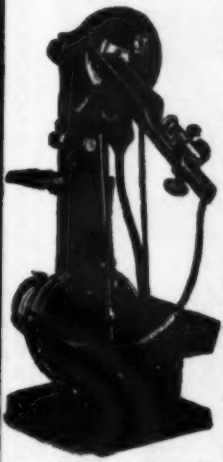
MASSEY MACHINE CO.
101 PEARL ST.,
WATERTOWN, N. Y.

FOR ALL TWIST DRILLS

YOU NEED A

New Yankee Drill Grinder

FOR LARGE DRILLS You Need a WET Drill Grinder



This is one of our wet machines. Can be used dry as well.

Handles drills up to 2¼ inches.

The centrifugal pump throws a solid stream of water right at the point of grinding.

Completely self-contained. Not a wrench required. Nothing but your hands to grind any drill *quickly* and *right*.

Price low. Easy to buy. Easy to install and easy to maintain.

Hundreds in daily use grinding drills so accurately that they do much more, better and quicker work than when ground by hand.

CATALOG?

Wilmarth & Morman Co.

575 Canal Street, Grand Rapids, Mich.

American TILTING ARBOR Saw Bench

An improved machine, adapted for cutting miters and bevels, cross-cutting, ripping and dadoing. Table tilts to 45 degrees. Right hand table runs on ball bearings. **A High-Grade Tool, that Will Suit in Every Way.**

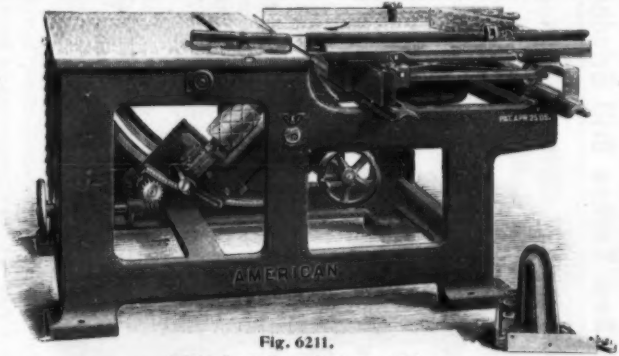


Fig. 6211.

Write for full particulars. Address

AMERICAN WOOD-WORKING MACHINERY COMPANY,

Salesrooms: New Orleans Chicago New York

AMERICAN WOOD-WORKING MACHINERY COMPANY,
Salesrooms: New Orleans Chicago New York

IF WE CAN SAVE YOU MONEY

Building Your Machine on Contract

It will be a good thing for you and for us. Neither of us can tell off-hand whether this is possible or not; but our success in this line ought to make it worth your while to figure with us. A modern shop, abundant facilities, and a corps of competent designers and mechanics, give us the advantage of a thoroughly efficient organization that could not easily be duplicated. It might take months or even years for you to realize the economy in cost of construction that perhaps we could obtain for you at the start. Glad to confer with you on the building of any machine up to two tons' weight.

Machines to Order for Special Work

Show us drawing of the work. We may be able to make a special machine for it that will materially cheapen the cost.

Glad to correspond or consult with you

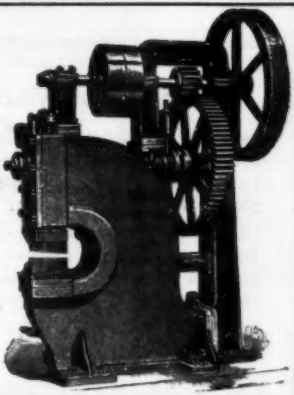
C. H. COWDREY MACHINE WORKS

FITCHBURG, MASS.

Government Contractors for Special Tools

"CINCINNATI"

Power Punches, Shears, Rolls



PATENT IMPROVED

The Cincinnati Punch & Shear Co., Cincinnati, O.

Pipe Threading Machines

From 1-4 to 18 Inches

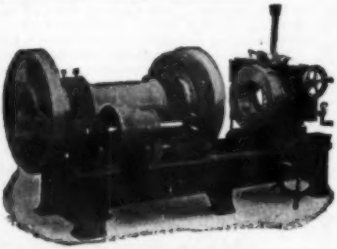
We are builders of the well known

Peerless,

P. D. Q. C.

and Duplex

Machines



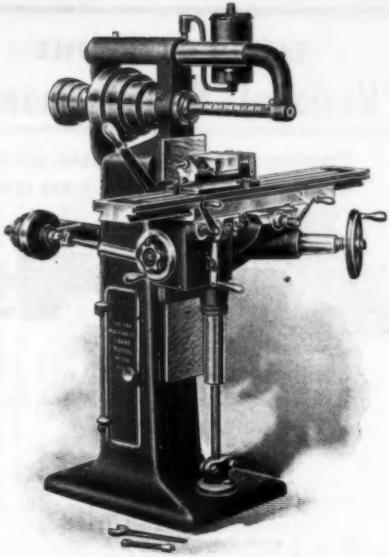
Let our circulars tell you why they are well known

BIGNALL & KEELER MFG. CO.

EDWARDSVILLE, ILL.

Sellers of Machinery

which is used in machine shops of any kind, should investigate carefully the facilities offered by **Hitchcock's Machine Tool List** for reaching this trade in all parts of the country. Its 25,000 circulation—one copy to each shop—covers this field with a thoroughness and effectiveness not equalled by any other advertising medium.



FOX MILLERS

HAND OR COMBINED HAND AND POWER FEED

No. 3½, shown above, has hand rack feed, combined with either hand or power screw feed, all instantly interchangeable. It is back geared, or not, as desired. Its range is 24x6x14¼ in. Get a catalogue, with complete description.

Sensitive Drills—Polishing Stands—Tube or Pipe Cutters—Pattern Shop Equipment

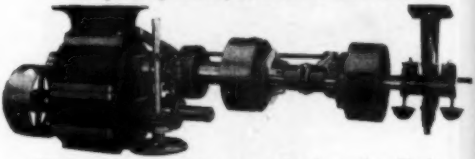
Fox Machine Co.

225 N. Front St., GRAND RAPIDS, MICH.

THE NEW AND IMPROVED

"National" Speed Changer

Provides six changes of speed, easily and quickly made, at a six-to-one ratio



This thoroughly practical and efficient device is made not only for use on machine tools, but

FOR ALL MACHINES

of any character, which require variable speed.

Ask for circular, describing fully this handy time and power saver

If at the same time you will send us the following data, we can give you more exact information, to suit your individual requirements, namely:

1. **Kind of machine to be driven.**
2. **Size of pulley on machine.**
3. **Width of belt you are using and whether single or double.**
4. **Fastest and slowest speed you want machine to run.**
5. **Number of R. P. M. of your line shaft.**
6. **Whether device is to hang from ceiling, stand on floor or bolt to wall.**

National Ma

208-10 Lawrence St.

DO YOU CARE TO SAVE MONEY

Cutting Your Key Seats?

If you do, we can show you how

USE AN ORDINARY DRILL PRESS

LET A BRIGHT BOY RUN IT

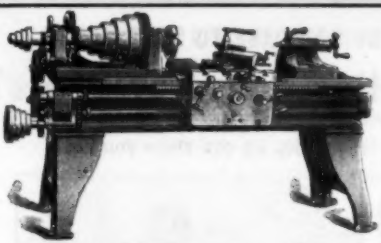
With Our Keyseating Tools

you can do absolutely accurate keyseating in from 50 to 75 per cent less time, and at proportionately less cost, than the work can possibly be turned out by any other method. Your drill press, with these attachments, is as good a keyseater as you can buy for money. It makes either straight or tapered seats, and its work is so perfect that no filing is required in fitting the key. With a special cutter, it makes rounded oil grooves as well.

The first cost is small—The saving goes on every day—Better let it begin now

Mane Tool Co.

Cincinnati, Ohio



Standard Engine Lathes

16 to 24 Inch Swing

—BUILT BY—

Greaves, Klusman & Co.

N. E. Cor. Cook & Alfred Sts., Cincinnati, O., U. S. A.

ALSO BUILDERS OF

Pattern Makers' Lathes & Machinery and Metal Spinners' Lathes

CLINCH CLIPS

15¢ Per 1000 IN QUANTITIES

The Best Paper Clip on the Market

250 lots, 10c, postpaid; 1,000 lots, 30c, postpaid; 5,000 lots, $1.25, postpaid; 25,000 lots, 15c per 1,000, f. o. b. Buffalo; 100,000 lots, 12½c per 1,000, f. o. b. Buffalo.

STEEL DIE

EMBOSSED STATIONERY

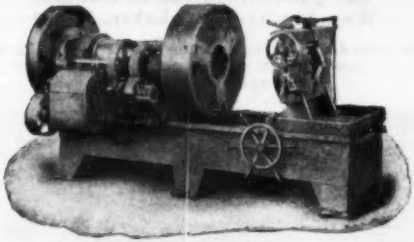
For business use at prices not much higher than type printing. Let us send you our specimen book, containing 100 samples.

American Embossing Co.

401 SENECA BLDG. **Buffalo, N. Y.**

OUR PIPE THREADING MACHINES

are built for hard, rapid work, and lots of it. They are MODERNIZED



All Sizes from ¼ Inch to 12 Inch. Belt and Motor Driven

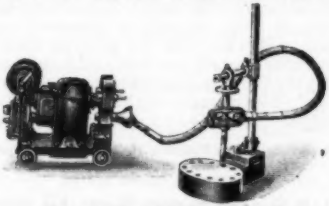
——SEND FOR THE BOOK——

The Stoever Foundry & Mfg. Co.
Myerstown, Pa.

..DRILLING..

Reaming, Tapping, Grinding, Polishing, in any place that is difficult to reach, is always expensive except where the

Stow Flexible Shaft IS USED



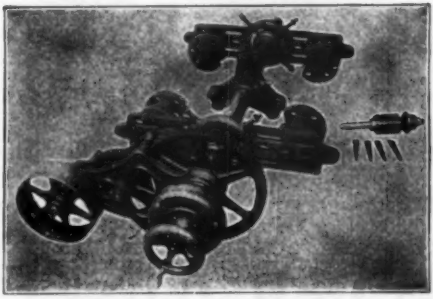
Let us tell you why

STOW FLEXIBLE SHAFT CO.
Callowhill & 26th Sts., PHILADELPHIA, PA.

BORING IN PLACE

The Quick Way...The Economical Way...Saving Time, Labor, Money

The cylinder is bored and the job completed in less time than it would take to detach it and carry it to the shop



Portable Cylinder Boring Bar

. . . For reboring locomotive and other engine cylinders, steam hammers, air compressors, Corliss valves, or any piece of similar work that is not easy to take to the shop. Bores anywhere and in any space large enough to admit of removing the piston. Works either by hand or with power, is powerfully geared, mechanically accurate, and a thoroughly practical machine in every particular. In any shop having work of the character for which it is designed, it will pay for itself in a short time.

We are specialists in Portable Tools, designed especially for railway repair shops. Detailed descriptive matter for the asking

L. B. Flanders Machine Works (Est. 1870)

H. B. UNDERWOOD & CO., Props.

1022 Buttonwood St., Philadelphia, Pa.

Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. Prices and full descriptions of the machines listed will be furnished by the parties offering them for sale. If you do not find what you require, use the slip inclosed with each book to make known your wants to the publisher.

FOR SALE BY

Bosworth, Dilley & Holding Co., 735 Rockefeller Bldg., Cleveland, O.

2 Boilers, water tube, Heine, 250 h. p. $4 per h. p.
2 Boilers, water tube, B. & W., 300 h. p. $4 per h. p.
Engine, Buckeye, automatic, 13x26. $500.
Pump, duplex, steam, Hughes, outside center packed plunger, 14x14x18. $550.
Pump, duplex, steam, Hughes, piston type, 14x12x18. $650.
Pump, duplex, steam, Hughes, piston type, 10x10x10. $250.

FOR SALE BY

The W. M. Pattison Supply Co., 197 St. Clair Av., N. E., Cleveland, O.

Boring mill, Betts, vertical, 6 ft., with 2 swivel heads, uprights set back to allow swing of 100 inches.
Boring machine, Niles, vertical, 60 in.
Hammer, helve, Bradley, 25 lb.
Hammer, helve, Bradley, 80 lb.
Hammer, steam, Bell, 700 lb.
Lathe, turret, American Tool & Machine Co. No. 2.
Planer, Lathe & Morse, crank, 12 in.
Planer, Gray, 22x22 in. x 5 ft.
Planer, Gleason, 28x28 in. x 9 ft.

FOR SALE BY

Western Machinery Co., . . . 91 Perin Bldg., Cincinnati, O.
C. H. Norton, Manager.

3 Boilers, tubular, 72 in. diam., 18 ft. long, butt joint and triple riveted, full flush fronts, and fittings complete.

Engine, Atlas, 13x15, center crank, 125 h. p., and a 72x16 tubular boiler, standard, 125 h. p., both complete and in fine condition, installed two years ago; also has pump and heater.

Engine, Russell, 11½x15, side crank, self-contained, automatic, and a 60x14 tubular boiler.

Will sell at a bargain.

Send for our list of machine tools, engines and boilers and miscellaneous machinery.

FOR SALE BY

The Randle Machinery Co., . 1739 Powers St., Cincinnati, O.

ENGINES—CORLISS AND AUTOMATIC.

20x48, Wheelock, single.	16x32, Buckeye.
20x48, Wheelock, double.	16x16, Ball & Wood.
18x36, Wright, single.	14x14, Ball & Wood.
16x42, Hamilton, single.	11x16, Atlas.

Throttling engines—H. S. & G., 18x22; Skinner, 14x18, and smaller sizes.
Boilers—Tubular, from 200 h. p. to 6 h. p.; fire box, from 50 h. p. to 10 h. p.; vertical, from 15 h. p. to 1 h. p.
Lathe, Star, hollow spindle, 32 in. x 10 ft.
Planer, New Haven, single, 33x30 in. x 9 ft.
Shaper, Steptoe, geared, 24 in.

FOR SALE BY

C. C. Wormer Mach'ry Co., 94-96 W. Woodbridge St., Detroit, Mich.

ENGINE LATHES.

16x10, Fitchburg, compound rest.
16x10, Dexter, cp. rest, hollow spdle.
17x6, Gray, pl. rest, ⅞ in. hol. spdle.
19x8, Star, plain rest, hollow spdle.
21x10, Bement, cp. rest, solid spdle.
21x12, Pond, comp. rest, solid spdle.
24x12, New Haven, pl. rest, solid sp.
24x16, Perkins, cp. rest, solid spdle.
26x14, Michel, pl. rest, solid spdle.
32x16, Enterprise, cp. rest, solid sp.
32x18, compound rest, solid spindle.
38x16, Fifield, cp. rest, solid spdle.

DRILLS.

18 in., square base, 1⅞ in. spindle.
20 in., square base, 1¼ in. spindle.
20 in., square base, wheel & lever fd.
20 in., square base, 1⅞ in. spindle.
36 in., sta. head, back gear. 2 in. sp.
4 ft. 6 in., radial, Niles, back geared.
4 ft., radial, Betts, dr. to cen. 80 in.cir.
Arm swinging, 13-16 in. spindle.
Harrington No. 1, suspens'n, bk. gd.
Portable, hand feed, 1 7-16 in. spdle.

BRASS FINISHERS' MACHINERY.

Valve miller, No. 0.
Valve miller, No. 1, 2 spindle.
Monitor lathe, Fox, 13x5, back gd.
Turret lathe, 15x5, friction gd. head.
Foot lathe, 15x6, with set-over turret.
Turret lathe, 17-⅞ in. swing, bk. gd.
Turret lathe, Fox, 16x6, back gd.
Turret lathe, Fox, 18 in. swing, bk.gd.

HAMMERS.

25 lb., helve, Bradley (2).
50 lb., belt driven, post.
100 lb., board lift, drop, 8 in. bet. upr.
200 lb., steam, Bement, single frame.
400 lb., board lift, drop, Bliss.
450 lb., steam, Bell Standard (2).

MILLING MACHINES.

Garvin, Lincoln, back geared, table 7½x28½.
Bement, plain, bk. gd., table 7x27.
Brown & Sharpe No. 12, plain.
Garvin No. 22, vertical, rotary table.
Bench, geared, bench space 18x24.
Plain, with overhanging arm.
Index, with vise and index plate.

PUNCHES AND PRESSES.

Long & A. No. 6, 1 in. str., gd. punch.
Heavy bench screw press, screw dbl. thread.
Geared bench press, 1 in. stroke.
No. 5 stamping press, 1½ in. stroke.
Fowler No. 2 fly wheel press, 1 in. str.
Bliss No. 18 open back, inclinable, fly wheel press, with knockout.
Toledo No. 51 plain power blanking, forming, horning and wiring press.

SHAPERS.

6 in., crank, cross travel 5½ in., vise.
12 in., Hendey, g. rk, 15 in. cr. travel.
16 in., G. & E., agle gd. crank, vise.
22 in., Walcott, gd. rack, cross travel
22 in. vert adj. 18 in.
22 in., L. & D., gd. rack, vise & c. s.

TURRET LATHES.

12 in. x 3 ft. 8 in., 6 in. diam., ⅝ in. h. s.
13 in. x 5 ft., ⅝ in. h. s., tur. 6 in. diam.
15 in. x 5 ft., 1 5-16 in. hollow spdle.
15 in. x 5 ft., ⅝ in. hollow spindle.
15 in. x 5 ft., 1 5-16 in. hole in spdle.
16 in. x 4 ft. 6 in., pl. hd., 1½ in. h. sp.
16 in. x 6 ft. 3 in., Fox, bk. gd., s. sp.
18 in. x 6 ft., pl. h., 15-16 in. hole in sp.

MISCELLANEOUS.

Brake, power, Dreis & Krump, O.K., steel, capacity 6 ft. long.
Burring machine, small, with stand.
Crank turning mch., up to 7 in. throw.
Crimping mche., Bliss No. 1, dbl. hd.
Cutting-off machine, 2½ in.
Cutting-off maching, Hurlburt & R., 4 in., with accelerated speed.
Cutting-off mche, Pratt & W., 2 in.
Die chamfering mche., countershaft.
Folding & seaming mche., auto., pwr.
Forming mche., slip, dbl., bk. gd.
Former & beader, bench, No. 2, pwr.
Furnace, soft metal, oil pot 16½ in.
Gear cutter, Gould & E., 36 in.
Grinder, tool room, Gisholt.
Keyseater, Mitts & Merrill No. 2.
Keyseater, Baker No. 1, 15 in. stroke.
Keyseater, Burton, horizontal.
Keyseater, Davis No. 1.
Mandrel stake, cast iron, hollow.
Profiling mche., Garvin, 18 in. movt.
Rolls, boiler shop, 56 in. bet. uprgts.
Rolls, boiler shop, 78 in. bet. uprgts.
Rolls, hand power, 31 in. bet. hsgs.
Rolls, stove pipe forming, 30 in.
Screw slotting mche., Garvin, rotary.
Seamer, Bliss No. 3, dbl., c. 20 in. di.
Sprue cutter, Bliss No. 297, throat 7½ in., foot power.
Tube cutter, Fox No. 4, multiple.
Turning machine, small, with stand.
Valve reseating mch, M. & D. No. 6.
Wiring machine, Columbian, stand.
Wire straightener and cutting-off machine, auto., cap. ⅜ in., adt.
Wire straightener and cutting-off machine, ⅛ in. adt., cap. 16 in.

Cuts or photos with detail of any above on application.

SECOND-HAND MACHINERY

FOR SALE BY

Marshall & Huschart Machinery Company,

62-66 S. Canal St., Chicago. 1024-25 Chemical Bldg., St. Louis.

BOLT CUTTERS.

2 dble. head, 1¾ and 1½ in., auto. stop.
2 in., Sellers.

DRILLS.

22 in., Canedy-Otto, post.
24 in., Barnes, back gear.
24 in., Blaisdell, sliding hd., bk. gear.
Quint, turret.
Bement & Sons, arch bar.
Dallet, portable.
Pratt & Whitney No. 1, 2 spindle.
Garvin No. 3, 4 spindle.
Redington, 3 spindle, sensitive.
2 Multiple, bicycle hub.

GRINDERS.

Sellers, twist drill, 2 in.
Yankee, Style A, twist drill.
Springfield, surface, table 24 in x 7 ft.
Special surface, table 16x10 in.

HAMMERS.

100 lbs., American, post.
500 lbs., Williams & White, drop.
1500 lbs., Bell, single frame, steam.
6000 lbs., Morgan, doub. frame, steam.

LATHES.

14x5, Goddard, rise and fall rest, hollow spindle.
14x6, Fish, compound rest, chuck.
14x6, LeBlond, comp. rest, hollow spindle.
14x6, Putnam, rise and fall rest, solid spindle.
15x5, Bradford, plain rest, hollow spindle.
15x6, Blaisdell, rise and fall rest, hollow spindle.
16x6, Fifield, rise and fall rest, hollow spindle.
18x8, Fuller, plain rest, solid spindle.
18x10, Mueller, plain rest, hollow spindle.
18x42x9-12, Putnam, sliding gap.
19x6, Fifield, rise and fall rest, solid spindle.
19x8, Gray, compound rest, solid spindle.
19x12, Lodge & Davis, comp. rest, hollow spindle.
20x12, Fifield, compound rest, solid spindle
21x8, Barnes, compound rest, solid spindle.
22x10, Pond, compound rest, solid spindle.
26x12, Putnam, plain rest, hollow spindle.
28x13, New Haven, comp. rest, solid spindle.
36x12½ bet. centers, Hilles & Jones, compound rest, solid spindle.
38x12, Fish, compound rest, solid spindle.
60 in., face plate.

PULLEY LATHES.

28 in., Stevens.
36 in., Niles.
48 in., Stevens.
60 in., Niles.

MILLING MACHINES.

Pratt & Whitney No. 2, Lincoln.
Mossberg-Granville No. 1.
Kempsmith No. 3, back gear.
Brown & Sharpe No. 12, plain.

PLANERS.

18x18 in. x 4 ft., Whitcomb, 1 head.
28x26 in. x 8 ft., Pease, 1 head.
30x30 in. x 8 ft., Wilson, 1 head.
42x36 in. x 10 ft., New Haven, 1 hd.

SCREW AND TURRET MACHINES.

Pratt & Whitney No. 2, screw.
1 in., Spencer, automatic, screw.
1 in., Cleveland, automatic, screw.
2½ in., Cleveland, automatic, screw.
48 in., Gisholt, turret lathe.

SHAPERS.

16 in., Juengst.
22 in., Walcott.

MISCELLANEOUS.

Axle cut-off lathe, Bement.
Blower, exhaust, 35 in.
Brazing table.
Gas cyanide furnace, No. 3.
Oil separator.
Nut machine, Blakeslee, 1 in., and furnace.
Profiler, Garvin.
Slotter, portable, Morton, 24 in.
Vertical furnace.

FOR SALE BY

Brown & Zortman Machinery Co., . . Pittsburgh, Pa.

LATHES.

14 in. x 4½ ft., Putnam, rise & fall rest and chuck.
14 in. x 6 ft., brass, American Tool Works.
16 in. x 6 ft., Harrington, comp. rest.
16 in. x 6 ft., Johnson, turret, turnstile feed.
16 in., Pratt & Whitney, turret, with friction head.
16 in. x 8 ft., Johnson, comp. rest.
18 in. x 10 ft., Schumacher & Boye, compound rest.
24 in. x 12 ft., Clement, pattern.
24 in. x 12 ft., Fifield, comp. rest.
36 in., Putnam, pulley, dbl. carriage.
38 in. x 16 ft., Fifield, comp. rest.
16 in. x 8 ft., Putnam, axle, single end.
26-44 in. x 10 ft., McCabe, dbl. spdle.
Turret, Potter & Johnson's Manufacturers' No. 4.

PLANERS AND SHAPERS.

24 in. x 6 ft., Pond planer.
30 in. x 10 ft., Pease planer.
42 in. x 18 ft., Betts planer, 1 head.
28 in., Juengst shaper, horiz'tl lever crank, table support.
28 in., Lodge & Davis shaper, rack.

DRILLS.

Garvin No. 2, 3 spindle, gang.
Garvin No. 3, 4 spindle, gang.
Bement-Miles, 6 spindle, arch bar.
Silver, 16 in., post, hand or power, with power feed and countershaft.
24 in., adjustable head.

PRESSES AND SHEET METAL TOOLS.

Bending rolls, 12 ft., for light material.
Corrugating roll, power driven, 6 ft.
Cornice brake, Robinson, 12 ft., cast iron, hand.
Cornice brake, Robinson, 8 ft., cast iron, hand.
2 Presses, Toledo No. 1, inclinable.
2 Presses, Toledo No. 2, inclinable.
2 Presses, Toledo No. 3, inclinable.
Press, Bliss No. 19, inclinable.
Squaring shear, Niagara, power, 12 ft., for 18 gauge.

CRANES.

5 ton, hand power, traveling, 16 ft. 9 in. span, with rails.
5 ton (2), single, I-beam, jib.
4 ton, single, I-beam, jib.
1½ ton, single, I-beam, jib.

MILLING MACHINES.

Milling machine, key-seat, Mitts & Merrill No. 2.
Miller, plain, Garvin No. 4½.
American Tool Works, 1½, universal.

KEY SEATERS.

Mitts & Merrell Little Giant No. 0.
Mitts & Merrill No. 2.

ENGINES.

Gas, vertical, 6 h. p.
Gas, 2, Fairbanks-Morse, 34 h. p., with clutches on each.
Steam, horiz'tl valve, center crank, 15 h. p.
Steam, Climax, automatic, 10 h. p.
H. S. & G., horizontal, slide valve, side crank, 35 h. p.
Blowing, Walker, single acting, three cylinder.

WOODWORKING MACHINES.

Band saw, Fay & Egan, 36 in.
Band saw, Marsden, 16 in.
Lathe, variety, Pringle & Brodie, 3 in.
Polishing machine, curtain pole, Pringle & Brodie.
Saw table, universal, iron frame, wood top.

MISCELLANEOUS.

Blower, Sturtevant No. 5.
Blower, Sturtevant No. 5, with countershaft.
Blower, Buffalo No. 9, with vertical discharge.
Bolt cutter, Schlenker No. 4, double head, 1¾ in.
Boring mill, Pratt & W., horizontal, double head, 36 in. x 14 ft.
Cold sawing machine, Westinghouse.
Cutter and reamer grinder, universal, Cincinnati No. 1.
Emery grinder, double, Lancaster, 14 in. wheels.
2 Emery grinders, dry, Webster & Perks, extra heavy.
Hammer, steam, Chambersburg, steelmakers', double leg, 1,500 lbs.
Hammer, steam, Fox, single leg, 300 lbs.
Pipe machine, Saunders, 2 in.
Pipe machine, Saunders, 4 in.
Tool grinder, wet, Springfield, 18 in.
Tool grinder, wet, Springfield, 36 in.

SECOND-HAND MACHINERY

FOR SALE BY

The H. A. Stocker Machinery Co., . 20-22 S. Clinton St., Chicago.

PLANERS.

16x16 in. x 3 ft., New Haven.
22x22 in. x 5 ft., Flather.
24x24 in. x 6 ft., Sellers, 1 head.
25x25 in. x 8 ft., Fitchburg, 1 head.
26x26 in. x 8 ft., Lodge & D., 1 head.
30x30 in. x 6 ft., Cin., 1 head, fine.
30x30 in. x 10 in., Amer. Tool Works, 2 heads, A1 condition.
32x32 in. x 10 ft., Lodge & Davis, 2 heads, excellent condition.
36x36 in. x 8 ft., Ohio Mch. Tool Co., 1 head, good order.
42x36 in. x 12 ft., Cinci. Planer Co., 2 heads, A1 condition.
42x36 in. x 14 ft., Amer. Tool Works, 2 heads, practically good as new.

SHAPERS.

14 in., Lodge & Davis.
22 in., Hendey.
24 in., Steptoe.
26 in., Cincinnati.
34 in., Walcott.

MILLING MACHINES.

2 Cincinnati No. 1, universal.
Costello, hand.
Garvin No. 3, hand.
Kempsmith No. 9, hand.
Becker-Brainard No. 5 C, plain, back geared.
Pratt & W. No. 2, Lincoln pattern.
Pratt & W. No. 12, Lincoln pattern.

LATHES.

14 in. x 6 ft., Reed, cp. rest and taper.
14 in. x 6 ft., Lodge & S., compound rest, taper and chuck.
16 in. x 6 ft., Von Wyck, c. r. & taper.
16 in. x 8 ft., Springfield, Ideal, cp. rest and chuck.
16 in. x 8 ft., Fitchburg, comp. rest.
18 in. x 8 ft., Rahn, cp. r. and ck.
18 in. x 8 ft., Springfield, comp. rest, taper and chuck.
18 in. x 8 ft., Greaves & K., c. r., ck.
18 in. x 10 ft., Flather, c. r. & chuck.
21 in. x 8 ft., Bradford, cp. r. & ck.
22 in. x 12 ft., Wright, cp. r. & ck.
24 in. x 12 ft., Blaisdell, comp. rest.
24 in. x 14 ft., Union Mach. Co., c. r.
28 in. x 16 ft., Putnam, comp. rest.
28 in. x 14 ft., LeBlond, comp. rest.
32 in. x 14 ft., Bradford, comp. rest, chuck and blocks to swing 42 in.

SHAFTING LATHES.

30x32, Pond, with shftg. attachment.
Medart straightener, fine order.

KEY-SEATERS.

Slotter, Baker, 20 in., with rotary table, all feeds.
Baker No. 2 Keyseater.

SCREW AND TURRET MACHINES.

12 in., Lodge & Davis, turret lathe.
16 in., Garvin, turret lathe.
16 in., Lodge & Davis, turret lathe.
16 in., Warner & S., turret lathe.
18 in., Fitchburg, chucking lathe.
48 in., turret chucking machine.
1¼ in., Warner & Swasey, screw machine.
Bardons & O. No. 5, screw machine.
Lodge & D. No. 7, screw machine.
Lodge & D. No. 3, screw machine.
Pratt & W. No. 2, screw machine.

PIPE MACHINES.

2 in., Jarecki No. 7.
2 in., Bignall & K., P. D. Q. No. 2.
4 in., Jarecki No. 9.
6 in., Merrell No. 6½.

BRASS WORKING TOOLS.

Monitor, Springfield Fox.
2 Arbor lathes, square, Amer. No. 1, with chasing bar.
Monitor, Am. No. 1 Fox, improved.
Arbor lathe, round, American No. 2, with chasing bar.

DRILLS.

26 in., Barnes, sli. head, back gear.
28 in., Blaisdell, sli. head, back gear.
36 in., Hamilton, bk. gd. and p. f., tapping attachment.
40 in., Aurora, sli. hd., b. g., p. f.
5 ft., Niles, radial, semi-universal.
Woodward & Rogers, 1 spindle.
Woodward & Rogers, 2 spindle.
2 Foote-Burt, 3 spindle.
2 Foote-Burt, 4 spindle.

MISCELLANEOUS.

Bolt cutter, Merriman, 2½ in.
Furnace, gas, Stewart.
Gear cutter, Walcott, 20 in., semi-automatic.
Grinder, Brown & Sharpe No. 3.
Grinder, B. & S. No. 3, cutter & tool.
Grinder, Detroit, 2 in. spindle.
Grinder, Webster & P., 2 in. spindle.
Grinder, Diamond Standard, 2 in. sp.
Hammer, drop, P. & W., auto., 800 lbs.
Press, power, Crosby, geared.
Press, power, Toledo No. 32.
Press, Consolidated No. 65 A, good as new.
Profiler, Garvin, single spindle.
Punch, Long & A. No. 5, double end.

FOR SALE BY

H. P. Nielson, ... St. Joseph, Mo.

Buffer, 12 in., with emery wheels and buffers.
Drill, Cincinnati, 24 in., with table and geared boring mill attachment and tapping attachment.
Drill, Washburn, sensitive, 14 in., with full equipment.
Grinder, mill, Garvin, 2½ in.
Lathe, Star, 12 in., 6 ft. bed, with pan, full set of collets and draw in chuck.
Lathe, turret, American, 22 in., with full set of tools.
Miller, Garvin No. 5, traverse head, 25x48 in.
Shaper, Steptoe, back geared, 16 in.
The above machine tools are in fine condition and good as new, being complete with over-head works. Full description and prices will be mailed on application. Also have large number of bench tools, taps, dies, etc.
State your wants.

FOR SALE BY

O. L. Packard Machinery Co., . Chicago, Ill., and Milwaukee, Wis.

LATHES.

13 in. x 5 ft.
14 in. x 6 ft., Putnam.
15 in. x 5 ft., Perkins.
15 in. x 6 ft., Fitchburg.
16 in. x 6 ft., Walcott.
18 in. x 8 ft., Blaisdell.
18 in. x 12 ft., Blaisdell.
18 in. x 14 ft., Bradford.
20 in. x 12 ft., Gray.
20 in. x 14 ft., Springfield.
28 in. x 12 ft.

PLANERS.

24x24 in. x 5 ft.
30x26 in. x 7 ft.
33x33 in. x 14 ft.
36x36 in. x 12 ft.

MILLERS.

Garvin No. 4.

MISCELLANEOUS.

Centering machine.
Cold saw, circular, small.
Cut-off machine, Hurlbut & R., 3 in.
Drill, 3 spindle, heavy pattern.
Drill, 4 spindle.
Drill, sensitive.
3 Emery stands, heavy pattern.
Grinder, drill, Washburn.
Grinder, Gorton, double disc.
Riveter, adt. ½ in.
Slotter, large size.

FOR SALE BY

Chas. Federspil Machinery Co., . 238 Broadway, Cincinnati, O.

DRILLS.

21 in., Aurora, stationary head.
22 in., Champion, post.
36 in., bk. gd., power feed., sq. base.
Sibley, new, any size.

LATHES.

12 in. x 5 ft., Sebastian.
18 in. x 8 ft., Lodge & Barker.
18 in. x 8 ft., Blaisdell.
9 in. x 40 in., C. & J., foot power.
14 in. x 5 ft., Lodge & Barker, turret.
36 in., Stevens, pulley lathe.

SHAPERS.

15 in., Kelley.
16 in., Sheppard.

MISCELLANEOUS.

Blower, Connersville No. 3.
Boring mill, car wheel, 42 in.
Engines, gasoline, Otto, 12 h. p.
Engines, gasoline, Advance, 20 h. p.
Engines, gasoline, Dean, 25 h. p.
Engines, twin, gasoline, Fairbanks, 50 h. p.
Gear cutter, spur, 22 in.
Hack saws, power.
Hammer, foot power.
Hoist, Maris, 8 ton.
Planer, iron, 30x30 in. x 10 ft.
Press, Robinson No. 4.
Pump, duplex, McGowan, 12x8½x10.
Punch and shear, Doty.
Anvils, vises, forges, iron safes.

SECOND-HAND MACHINERY

FOR SALE BY

Hill, Clarke & Co. of Chicago, - - Chicago, Ill.

SPEED LATHES.

12 in. x 4 ft.	$ 30
12 in. x 5 ft., Prentice	30

PLAIN TURNING LATHES.

13 in. x 5 ft., Pratt & Whitney	$ 65
14 in. x 4 ft., Reed	90
17 in. x 11 ft., Fitchburg	150
19 in. x 10 ft., Fitchburg	175
26 in. x 13 ft., Pond	325

ENGINE LATHES.

12 in. x 5 ft., Ames	$ 130
12 in. x 5 ft., Blaisdell	135
13 in. x 5 ft., Blaisdell	135
13 in. x 5 ft., Prentiss	135
13 in. x 6 ft., Blaisdell	100
14 in. x 4 ft., Reed	165
14 in. x 4 ft., Blaisdell	130
14 in. x 5 ft., Blaisdell	115
14 in. x 6 ft., Blaisdell	120
14 in. x 6 ft., Prentice	140
14 in. x 6 ft., Lodge & Davis	190
14 in. x 6 ft., Johnson	300
15 in. x 4 ft., Blaisdell	130
15 in. x 5 ft., Blaisdell	175
15 in. x 5 ft., Pratt & Whitney	115
15 in. x 6 ft., Blaisdell	190
16 in. x 6 ft., Pratt & W., taper	175
16 in. x 6 ft., Blaisdell	175
16 in. x 8 ft. Putnam	140
17 in. x 6 ft., Blaisdell	215
18 in. x 6 ft., New Haven	125
18 in. x 6 ft., Hamilton	315
18 in. x 6 ft., Bradford	250
18 in. x 8 ft., Hamilton	330
20 in. x 8 ft., Hamilton	370
32 in. x 12 ft., Gleason	675
63 in. x 30 ft., Bement-Miles	4,000

SHAPERS AND PLANERS.

24x24 in. x 5 ft., Whitcomb	$ 300
32x32 in. x 6 ft., Niles	1,000
41x36 in. x 12 ft., New Haven	950
54x54 in. x 9 ft., Sellers	1,500
60 in. x 25 ft., Sellers	1,500
120x120 in. x 20 ft., Bement	10,000

PUNCH PRESSES.

Foot press	$17.50
Stiles No. 1	40
Bliss No. 18	60
Smith, solid back	75
Niagara No. 4, inclined	85
Ferracute No. 51	100
Ferracute No. 1	125
R. & K. No. 2, clamping attach.	125
Stiles No. 3	175
Crosby No. 40, back geared	175
Ferracute, P 3	190
Crosby No. 45	225
R. & K. No. 4-0, back geared	300
Crosby No. 70	350
Stiles No. 5, back geared	450
Bliss No. 74½, back geared	600
Bliss No. 75½, back geared	850

GRINDERS AND BUFFERS.

1½ in., double end grinder	$ 18
Detroit, double end grinder	20
Springfield, surface grinder	350
Automatic cutter grinder	75
Twist drill grinder	30
Brainard, bench grinder	90
1½ in., Detroit	20
24 in., Bridgeport, water grinder	50
36 in., Springfield, water grinder	60
Diamond No. 2, bench buffer	9

MILLING MACHINES.

Oesterlein No. 24, universal	$ 575
Brainard No. 12, universal	550
Brainard, 36 in., gear cutter	600
22 in. x 12 ft., Newton	1,000
28 in. x 6 ft., P. & W., slab	850

DRILLS AND BORING MACHINERY

Friction, No. 1	$ 20
Friction, No. 2, b. g., p. f.	50
25 in., Snyder drill	160
40 in., Bement	225
51 in., Bement	350
Friction, No. 3	100
4 spindle, Barr	120
4 spindle, Woodward & R.	125
6 spindle, Pratt & Whitney	350
Beaman horiz'l boring machine	400
Crosby horizontal boring mill	400
Sellers cylinder boring mach.	1,000

TURRET MACHINERY.

¾ in., Cleveland, automatic	$ 300
¾ in., Bardons & Oliver	210
¾ in., Cleveland, automatic	400
Pratt & Whitney No. 2	225
⅞ in., Garvin	150
1 in., Windsor	170
1⅛ in., Cleveland, automatic	500
1¼ in., Garvin	235
1¼ in., Hartford, automatic	475
2 in., Garvin, double turret	375
1½ in., Pearson	240
2½ in., Pearson, forming mache	425
Pratt & Whitney No. 2½	275
3 in., Garvin, forming machine	350
16 in., American Fox lathe	225

MISCELLANEOUS.

Centering machine, Whiton, 3½ in.	$ 45
Hack saw, Q. & C. No. 2	12
Hack saw, Story	25
Hammer, drop, Bliss, 100 lbs.	50
Hammer, drop, Adossberg, 200 lb.	225
Keyseater, Morton, 18 in.	150
Lathe, pulley, Pond, 30 in.	300
Pipe cutter, roller, B. & K. No. 4.	40
Profiler, Garvin	250
Profiler, Warner & Swasey	250
Punch & shear, Long & A. No. 8	65
Reaming stand, Flather No. 2	50
Shear, rotary, Bliss No. 107	125
Tube cutter, Fox, 1½ in.	15

FOR SALE BY

James Sheridan & Sons, ... Franklin, Pa.

Boiler, steam, Erie City, 40 h. p.
Engine, steam, Erie City, 10 h. p.
Engine, steam, Titusville, 12 h. p.
Engine, steam, Phœnix Iron Works, 40 h. p.
Lot of second-hand engine pulleys.
Fire engine, steam, Button, made in Newburg, N. Y.
Hammer, steam, Bement, single stand, 800 lbs.

FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.

210-212 Washington Ave. . . . . St. Louis

Bolt header or forging machine, Blakeslee, 2½ in., good condition.
Drill, Gleason, boiler maker's, suspension.
Engine, Fulton-Corliss, 22x42.
Engine, St. Louis-Corliss, 18x42.
Jig saw, J. A. Fay, good condition.
Planer, Whitcomb, 36x36 in. x 8 ft.
Planer, Powell, 24x24 in. x 6 ft.
Planer, Fitchburg, 22x22 in. x 8 ft.

FOR SALE BY

H. B. Stimson, . . 137-139 Washington St., Buffalo, N. Y.

Boiler, vertical, 20 h. p.
Boiler, horizontal, portable, 20 h. p.
Boiler and engine, combined, vertical, 10 h. p.
Engine, gas, horizontal, 15 h. p.
Engine, gas, vertical, 6 h. p.
Engine, steam, Nagle, automatic, 8x10.
Engine, steam, Nagle, automatic, 9x12.
Exhaust fan, Sturtevant No. 6, 11 in. outlet.
Exhaust fan, Champion No. 9, 13 in. outlet.
Lathe, engine, 25 in. x 13 ft.
Pump, steam, Hall, duplex, 12x7x12 in.

FOR SALE BY

C. J. O'Hara, ... 16 Wayne St., Detroit, Mich.

Air hoists, 14, from 2 ft. 6 in. stroke to 4 ft. 2 in., A845.
Air hoists, 4, and barrel hose.
Boilers, 2, fire box, portable, 36 in. x 12 ft., heating surface 214 sq. ft., B135.
Boilers, 2, fire box, portable, 42 in. x 10 ft., heating surface 240 sq. ft., B137-8.
Cutter, roller tube, mounted on wood stand, A810.
Cylinder boring and facing machine, hor., 28 in. swing, bar 5 in. x 10 ft. 1 in.
Cylinder boring outfit, consisting of two bars each 4 in. diam., A857.
Drill press, bench, 21 in., to be mounted on a bracket hung from wall, A306.
Drilling head, Stowe No. 4, A847.
Lathe, engine, Star, 19 in. x 8 ft., turret on shears, actual swing 26 in., A82.
Lathe, pulley, Bull, 24 in. x 8 ft.
Pipe machine, Curtis No. 110, capacity ⅝ to 6 in., with countershaft, A486.
Planer, boiler plate, Niles, planes any length, A428.
Punch and shear, No. 3, single end, 7 in. throat, will punch ⅝x⅝ in., A517.
Punch and shear, No. 3, single end, 24 in. throat, will punch ⅝x⅝ in., A518.
Punch and shear, No. 3, single end, 12 in. throat, will punch ⅝x½ in., A516.
Punch and shear, No. 2, blacksmith, 7 in throat, will punch ⅝x⅝ in., A531.
Punch and shear, No. 3, blacksmith, 7½ in. throat, will punch ⅝x⅝ in., A522.
Rivet forges, Bradley Nos. 1 and 6, A842.
Rolls, boiler shop, taking 6 ft., 6 in. between uprights, A808.
Valve reseating machine, Morse & Dexter No. 6, for valves ⅛ to 6 in., A858.
The above tools must be disposed of within thirty days; any reasonable offer considered.

SECOND-HAND MACHINERY

FOR SALE BY

Johnson Service Co., ... **Milwaukee, Wis.**

Fan, suction, 24 in., $10. No. 117.
Forge, blacksmith's.
Gear cutter, Garvin, automatic, 8 in., $60. No. 10.
Grinder, Stow, flexible shaft, $50. No. 59.
Lathe, buffing, small, used for scratch brushing, $5. No. 111.
Lathe, polishing, Hanson & Van Winkle No. 7, 1902, $34. No. 112.
Lathe, polishing, Hanson & Van Winkle No. 7, $20. No. 113.
Lathe, polishing, Diamond Machine Co. No. 3, $23. No. 115.
Lathe, speed, Lodge & Davis, 14 in., $50. No. 47.
Lathe, speed, Lodge & Davis, 14 in., with compound slide rest, $47. No. 48.
Tapping machine, Garvin, horizontal, $17. No. 63.
All prices at our door. Machines are in good running order, but we have replaced them with motor-driven machines. Cash before shipment.

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of advertisers herein, won't you kindly remember to say somewhere in your communication that the inquiry comes from Hitchcock's Machine Tool List? Advertisers are human; they like to know that the medium in which they spend their money is received and consulted by machinery users. Not being mind readers, they can only know this when you tell them, and if you neglect to tell them, the Tool List is deprived of credit for the service it has rendered.

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SHOP FURNITURE

HANDY tool stands; strong iron shelving, mounted as desired; blacksmiths' racks, for smith shop and forge room; lathe racks; lathe pans on castors, with draw-off cocks; bench legs, giving strong, stiff, independent, self-sustained benches; a complete line of shop furniture, making for cleanliness, strength, economy of space and of workmen's time.

Some shops cannot use all our furniture at any time. All shops can use some of it to advantage all the time.

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THE NEW BRITAIN MACHINE CO.

60 Chestnut St., NEW BRITAIN, CONN.